



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,637	11/26/2003	Darren S. Sheehan	60,246-288; 10,451	6442
26096	7590	07/10/2006		EXAMINER
CARLSON, GASKEY & OLDS, P.C.				MAYEKAR, KISHOR
400 WEST MAPLE ROAD				
SUITE 350			ART UNIT	PAPER NUMBER
BIRMINGHAM, MI 48009			1753	

DATE MAILED: 07/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/723,637	SHEEHAN, DARREN S.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Kishor Mayekar	1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 01 May 2006.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-16 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date: _____.
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>01/06</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____.

## DETAILED ACTION

1. Applicant's arguments with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Amended independent claims 1 and 10 contain the added limitation "mounted". This limitation raises an issue of new matter as it has no support in the specification at the time the invention was filed.

*Claim Rejections - 35 USC § 102 and § 103*

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-4, 9-11 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 09-309,326A. JP '326's invention provided with a computer English translation is directed to an air conditioning system for an automobile equipped with means for deodorization. JP '326 discloses that the system comprises a fluid handling component or a heat transfer element (an evaporator), a photocatalyst disposed on a surface of a substrate (a heater core), and an UV light oriented to direct UV light onto a surface of the fluid handling component and on the photocatalyst (Fig. 1; [0015] and [0020]).

7. Claims 5, 6, 12 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by JP '326 in light of Atkins et al. (US 4,256,472). JP '326 as applied above does not detail the evaporator as the recited evaporator coil. Atkins shows the evaporator of an auto air conditioning system is an evaporator coil (see abstract and col. 3, lines 54-57). In light of Atkins, JP '326's evaporator is an evaporator coil as claimed.

8. Claims 7, 8 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP '326 in view of Atkins '472, Fencl et al. (US 5,817,276) and/or Washburn et al. (US 6,182,461 B1). The differences between JP '326 as applied above and the instant claims are the provision of a drain pan with the evaporator, and the UV light source being one of a plurality of UV light sources. Atkins shows in an automobile air conditioner with a filter and an evaporator coil the detailing of drain pan under the evaporator coil for collecting any moisture condensing upon the evaporator (Fig. 1 and col. 3, lines 38-43). Fencl shows in an air conditioning system with means for surface and air sterilization the provision of an UV light source oriented to direct UV light onto an evaporator and a drain pan wherein the UV light source is one of a plurality of UV light sources (Fig. 2). Washburn shows the same

(Fig. 1). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified JP '326 as shown by Atkins, Fencl and/or Washburn because, as drain pan being a part of the air conditioning system and installed below the evaporator, this would result in removing bacteria and fungi attached within the drain pan in addition to on the evaporator by the UV light source, and, as to the provision of a plurality of UV light source, this would depend upon the size of the air conditioning system, e.g., the air flow rate and the size of the evaporator.

9. Claims 1-4, 8, 10, 11, 13 and 15 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by JP 2001-153,386A. JP '386's invention provided with an English computer translation is directed to an air conditioning system with means for removing odor. JP '386 discloses the system comprises a heat exchanger (a fluid handling component or heat transfer element), a photocatalyst disposed on a surface of a honeycomb substrate, and a plurality of UV light sources mounted and oriented to direct UV light onto a surface of the heat exchanger and on the photocatalyst, wherein the UV light source is between the heat exchanger and the photocatalyst (Fig. 3; abstract; and [0006]).

10. Claims 5-7, 9, 12, 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP '386 in view of Atkins '472 and either Fencl '276 or Washburn '461. JP '386 as applied above shows in Fig. 3 a structure below the heat exchanger. The differences between JP '386 as applied above and the instant claims are the provision of the recited evaporator coil as the fluid handling component or heat transfer element and the detailing of the recited drain pan. Atkins shows in an air conditioner with a filter and an evaporator the detailing of drain pan under the evaporator coil for collecting any moisture condensing upon the evaporator (Fig. 1 and col. 3, lines 38-43) and the evaporator coil being a heat exchanger (col. 3, lines 27-33). Fencl shows in an air conditioning system with means for surface and air sterilization the provision of an UV light source oriented to direct UV light onto an evaporator and a drain pan (Fig. 2). Washburn shows the same with the evaporator coil being a heat exchanger (Fig. 1 and abstract). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified JP '326 as shown by Atkins and either Fencl or Washburn because, as drain pan being a part of the air conditioning system and installed below the evaporator coil and the evaporator coil

being a heat exchanger, this would result in removing bacteria and fungi attached within the drain pan in addition to on the evaporator by the UV light source.

As to the subject matter of claim 9, since Washburn shows the heat exchanger coil being part of a fan coil unit in addition to part of an air conditioning system, the selection of the heat exchanger coil with means for treating the air for microbial contaminants to be part of a HVAC system would have been within the level of ordinary skill in the art as this would result in purification of air in the HVAC system

#### *Response to Arguments*

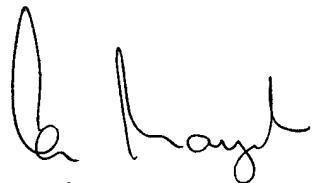
11. Applicant's arguments filed 01 May 2006 have been fully considered but they are not persuasive, because of the new grounds of rejections as set forth in the paragraphs above.

#### *Conclusion*

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kishor Mayekar whose telephone number is (571) 272-1339. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Kishor Mayekar  
Primary Examiner  
Art Unit 1753